WHAT IS CLAIMED IS:

1. An electrode for a fuel cell, comprising a catalyst layer including a proton-conducting substance.

2. An electrode for a fuel cell, comprising:

a catalyst particle;

a carrier supporting the catalyst particle;

a catalyst layer comprising an ion-exchange resin; and

a conductive porous substrate supporting the catalyst layer,

wherein the catalyst layer includes a proton-conducting substance.

3. The electrode for a fuel cell as claimed in Claim 1 wherein the proton-conducting substance is an acid.

4. The electrode for a fuel cell as claimed in Claim 2 wherein the proton-conducting substance is an acid.

5. The electrode for a fuel cell as claimed in Claim 1 wherein the proton-conducting substance is a solid acid.

6. The electrode for a fuel cell as claimed in Claim 2 wherein the proton-conducting substance is a solid acid.

7. The electrode for a fuel cell as claimed in Claim 3 wherein the proton-conducting substance is a solid acid.

8. The electrode for a fuel cell as claimed in Claim 5 wherein the solid acid has a water of crystallization.

9. The electrode for a fuel cell as claimed in Claim 6 wherein the solid acid has a water of crystallization.

10. The electrode for a fuel cell as claimed in Claim 7 wherein the solid acid has a water of crystallization.

11. The electrode for a fuel cell as claimed in Claim 5 wherein the solid acid is a heteropolyacid.

12. The electrode for a fuel cell as claimed in Claim 6 wherein the solid acid is a heteropolyacid.

13. The electrode for a fuel cell as claimed in Claim 7 wherein the solid acid is a heteropolyacid.

14. The electrode for a fuel cell as claimed in Claim 11 wherein the heteropolyacid is one or more selected from a group consisting of phosphomolybdic acid, silicomolybdic acid, phosphotungstic acid, silicotungstic acid, phosphotungstomolybdic acid, silicotungstomolybdic acid,

phosphovanadomolybdic acid and phosphovanadotungstic acid.

15. The electrode for a fuel cell as claimed in Claim 12 wherein the heteropolyacid is one or more selected from a group consisting of phosphomolybdic acid, silicomolybdic acid, phosphotungstic acid, silicotungstic acid, phosphotungstomolybdic acid, silicotungstomolybdic acid, phosphovanadomolybdic acid and phosphovanadotungstic acid.

16. The electrode for a fuel cell as claimed in Claim 13 wherein the heteropolyacid is one or more selected from a group consisting of phosphomolybdic acid, silicomolybdic acid, phosphotungstic acid, silicotungstic acid, phosphotungstomolybdic acid, silicotungstomolybdic acid, phosphovanadomolybdic acid and phosphovanadotungstic acid.

17. The electrode for a fuel cell as claimed in Claim 1 wherein the proton-conducting substance is a fullerene derivative.

18. The electrode for a fuel cell as claimed in Claim 2 wherein the proton-conducting substance is a fullerene derivative.

19. A fuel cell, comprising:

an electrode for a fuel cell in a fuel-feeding side;

an electrode for a fuel cell in an oxygen-feeding side; and

a solid electrolyte membrane sandwiched between these electrodes,

wherein at least the electrode for a fuel cell in the oxygen-feeding side is the electrode for a fuel cell as claimed in Claim 1.

20. A fuel cell, comprising:

an electrode for a fuel cell in a fuel-feeding side;

an electrode for a fuel cell in an oxygen-feeding side; and

a solid electrolyte membrane sandwiched between these electrodes,

wherein at least the electrode for a fuel cell in the oxygen-feeding side is the electrode for a fuel cell as claimed in Claim 2.